

Management of fetuses with normal growth and abnormal cerebroplacental ratio

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Objective

To propose a risk-based approach for the management of pregnancies with normal estimated fetal weight (EFW) and abnormal cerebroplacental ratio (CPR) in the last weeks of pregnancy.

Methods

This was a retrospective study of 943 pregnancies, that underwent a CPR and EFW evaluation at ≥ 34 weeks. CPR values were converted into multiples of the median (MoM) and EFW into centiles according to local references. Afterwards, pregnancies were divided into four groups: normal fetuses: CPR ≥ 0.6765 MoM and EFW $\geq 10^{\text{th}}$ centile, fetal growth restriction (FGR): CPR < 0.6765 MoM and EFW $< 10^{\text{th}}$ centile, Small for gestational age (SGA): CPR ≥ 0.6765 MoM and EFW $< 10^{\text{th}}$ centile, and fetuses with apparent normal growth (EFW $> 10^{\text{th}}$ centile) and abnormal CPR (< 0.6765 MoM), that present a failure to reach the growth potential (FRGP). Intrapartum fetal compromise (IFC) was defined as an abnormal intrapartum cardiotocogram (CTG) or pH requiring cesarean delivery. Risk comparisons were performed among the four groups, based on the different frequencies of IFC. According to each individual risks and considering earlier consensus, risks were extrapolated into a gestational age (GA) scale, defining for each of the groups the optimal week to terminate the pregnancy.

Results

FGR was the group with the highest frequency of IFC, followed by FRGP, SGA and normal groups. The risks of the FGR and normal groups were used to delimitate the limits of the scales. Extrapolation of risk into the GA scale placed the optimal GA for pregnancy finalization at 39 weeks in case of FRGP and at 40 weeks in case of SGA.

Conclusion

Fetuses at the end of pregnancy may be evaluated according to CPR and EFW defining 4 groups that present a progressive risk of IFC. Considering earlier consensus and IFC risk, finalization of pregnancy in FRGP fetuses might be established around 39 weeks.